



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/509,740

07/26/2005

Shin-ichi Kadowaki

2004_1498A

9921

513 7590 08/07/2008

WENDEROTH, LIND & PONACK, L.L.P.

2033 K STREET N. W.

SUITE 800

WASHINGTON, DC 20006-1021

EXAMINER

AGUSTIN, PETER VINCENT

ART UNIT

PAPER NUMBER

2627

MAIL DATE

DELIVERY MODE

08/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/509,740	Applicant(s) KADOWAKI ET AL.	
	Examiner Peter Agustin	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 46-50,52,53,151 and 152 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 46-50,52,151 and 152 is/are rejected.
- 7) ☒ Claim(s) 53 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This application is a national stage entry (371) of PCT/JP03/04209 filed on April 2, 2003.
2. Claims 46-50, 52, 53, 151 & 152 are currently pending.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

4. Figures 20-27 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

6. Claims 50 & 53 are objected to because of the following informalities:
Claim 50, line 2: "distinguished each other" should be --distinguished from each other--.
Claim 53, line 2: "the optical pickup head" should be --an optical pickup head--.
Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 151 & 152 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 151 recites a reproducing method, but does not positively recite the steps included in this method, rendering the claim incomplete. Furthermore, there is no clear interrelation between the reproducing method of claim 151 and the optical storage medium of claim 46. See MPEP § 2172.01.

Claim 152 recites a recording method, but does not positively recite the steps included in this method, rendering the claim incomplete. Furthermore, there is no clear interrelation between the recording method of claim 152 and the optical storage medium of claim 46. See MPEP § 2172.01.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 46-50, 52, 151 & 152 are rejected under 35 U.S.C. 102(b) as being anticipated by Shoji et al. (WO 2002/025645, published March 28, 2002) (please refer to equivalent U.S. Application Publication US 2003/0185128).

In regard to claim 46, Shoji et al. disclose an optical storage medium (Figure 1) including multiple tracks formed concentrically or in a spiral (as shown in Figure 2), for recording information using marks and spaces between the marks (as shown in Figure 20), each mark having a mark length limited by a run length limited (RLL) modulation (see paragraph 0131), wherein a signal not including edges adjacent to the shortest marks and/or the shortest spaces denotes a first playback signal quality (see paragraphs 0208 & 0209).

In regard to claim 47, Shoji et al. disclose that a signal including edges adjacent to the shortest marks and/or the shortest spaces denotes a second playback signal quality (paragraph 0209: “signal quality of a 3T mark”).

In regard to claim 48, Shoji et al. disclose that the first playback signal quality is higher than the second playback signal quality (paragraph 0209: “3T mark is the shortest run, and provides the recording/reproduction signal with the worst S/N ratio”).

In regard to claim 49, Shoji et al. disclose that jitter is detected as the playback signal quality (paragraphs 0208 & 0209).

In regard to claim 50, Shoji et al. disclose that leading-edge jitter and trailing-edge jitter are distinguished from each other (see Figure 19).

In regard to claim 52, Shoji et al. disclose that the optical storage medium includes multiple recording layers, wherein the first playback signal quality is set for at least one layer of the multiple recording layers (see paragraph 0154).

Claims 151 & 152 have similar limitations as claim 46; thus, they are rejected on the same grounds.

Allowable Subject Matter

11. Claim 53 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record alone or in combination fails to teach or suggest:

in claim 53, “wherein the quality of the layer farthest from the optical pickup head is highest”.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Choi (US 6,252,835) discloses an apparatus for automatically adjusting focus offset wherein a signal from an RF amplifier is provided into a signal separator which in turn separates only a 3T signal in the RF signal so as to measure the jitter.

Nakayama et al. (US 6,366,631) disclose a jitter measuring method wherein if the optical disc to be reproduced is a compact disc, a first jitter measurement device can only detect the jitter component of a waveform with a cycle of 3T, by using one integration circuit; but it cannot detect the jitter component of the waveform with the other cycles, for example, the waveform with cycles from 4T to 11T.

Mashimo et al. (US 2002/0159345) disclose an invention wherein by first setting a boost amount to zero, the delay characteristics of an RF signal from 3T to 11T are flattened such that an accurate jitter amount can be determined based on the integrated value of the phase

differences of 3T to 11T, thereby allowing an optical pickup to be adjusted so as to minimize the jitter amount.

Takeda (US 2003/0053386) discloses an invention wherein the jitter value is calculated from the edge difference between the rising edge and the falling edge of the signal and a reference clock, even when the 3T signal is missing, for example, the jitter value is measured at the rising edge or the falling edge of the remaining signals of 4T to 11T or 4T to 14T.

Roh et al. (US 7,170,835) disclose a jitter detecting unit that includes a 3T signal detector for extracting only a 3T signal component from a binary signal outputted from an R/F unit, and a phase difference detector for synchronizing the extracted 3T signal with a channel bit clock, and detecting a phase difference between the 3T signal and a signal generated in accordance with the synchronization of the 3T signal at leading and trailing edges, respectively.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Agustin whose telephone number is (571) 272-7567. The examiner can normally be reached on Monday-Thursday 8:30 AM-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

Art Unit: 2627

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Peter Vincent Agustin/
Patent Examiner, Art Unit 2627